

REMARKS

Claims 1-26 and 57-64 were examined in the last office action. Claims 65-67 are added and claims 1, 5-11 and 62-64 are cancelled in this paper, leaving for examination claims 2-4, 12-26, 57-61 and 65-67.

All claims were rejected with new grounds under 35 U.S.C. § 101. All claims were rejected under §§ 103(a) or 102 as unpatentable over Fields and a variety of other references.

Rejection Under 35 U.S.C. § 101 of Claims 1-26, and 57-64

The Examiner rejects **claims 1-26 and 57-64** under 35 U.S.C. § 101 as directed to non-statutory subject matter, some of which have been cancelled.

Claim 1 is replaced by claim 65, which includes eliciting data and generating analytical reports.

Claim 59 is a device claim to which the Examiner applied *by reference* an inappropriate method claim analysis. Withdrawal of the rejection of claim 59 is respectfully requested.

The remaining claims depend from claim 1 or 59 and pass muster under § 101 for at least the same reasons as the claims from which they depend.

Applicants respectfully submit that the rejection of claims 2-4, 12-26 and 57-61 under § 101 should be withdrawn.

Rejection Under 35 U.S.C. § 102(b) of Claims 1-3, 5, 7-13, 18-20, 23-26, 59 and 62

The Examiner rejects **claims 1-3, 5, 7-13, 18-20, 23-26, 59 and 62** under 35 U.S.C. § 102(b) as anticipated by Fields et al. (U.S. 5,459,656). Among these, claims 1, 5, 7-11 and 59 have been cancelled.

Claim 65

The Examiner's attention is directed to **claim 65**, which replaces claim 1 and includes the limitations:

A computer-implemented method of responding to a disruptive event that impacts demand into the indefinite future for a plurality of items at one or more locations, including:

modeling with a data structure stored in computer readable memory disruptive events that impact demand for a plurality of items at one or more selling locations,

wherein the disruptive event, unlike a transitory promotional event, has an impact on the demand into the indefinite future for the plurality of items that is represented in the data structure by at least

a good identifier for a good,

a selling location identifier for a selling location,

a start date and no effective stop date, and

at least a step function that represents an impact estimate of disruption to demand for the good at the selling location beginning at the start date;

eliciting from a retail manager data to describe disruptive events;

forecasting unit inventory and unit sales at a per-item, per-location level for a forecasting cycle using the data structure to take into account the disruptive events; and

generating, from results of the forecasting using the data structure consistently across analytical tools, analytical reports that support retailing activities.

These limitations are not found in Fields et al.

Fields performs a different function, in a different way, with a different result than from what we claim. The function in Fields is production planning for goods sold during a day, such as cookies. Col. 6, lines 23-41. "Production" is mentioned 90 times throughout the reference and "production plan*" occurs 42 times. The way that Fields plans for the day is to predict a total demand and select a demand curve that distributes the total demand over the course of the day for planning purposes. See, e.g., Summary of Invention, col. 2, lines 5-20; col. 4, lines 30-51. "Demand curve" appears 131 times in the reference, in the context of master demand curves, business demand curves, actual demand curves and percentage demand curves. The curves are consistently stored and applied to demand as a percentage of total demand per time interval. Col. 4, lines

30-51. The result of applying Fields is a plan for producing goods or staffing a function through the “day” – a term that appears 214 times.

Of course, Fields does not literally do what we claim. In contrast to Fields, our method and device provide a tool capable of addressing issues such as new product introduction and changes in the competitive environment – opening and closing of competitive stores. These are retailing issues in the category of “long felt need” that Fields makes no attempt to address. *See, Application*, at 0016. The description of a disruptive event, in contrast to a transitory promotional event, now includes the positive/negative limitation “a start date and no effective stop date.” By way of illustration, when a new product is introduced, the product introduction may be expected to cannibalize demand for an old product. The new product may be from a different manufacturer or the same manufacturer, but in many cases the total demand, for instance for raspberry jelly, is not changed by the new product introduction. By “no effective stop date” we mean that the impact goes into the indefinite future and at least beyond the end of the forecasting cycle, so one cannot avoid infringing this claim by adding ineffective stop dates to the data structure.

Applicants to not intend to introduce any new matter in this claim. The notion in the preamble of disruptive events extending indefinitely into the future is supported at 0015. Using a computer readable data structure stored in memory in the form of a data tuple is supported throughout the application, including the original claims and figures and the six related applications that are incorporated by reference. The figures reflect a plurality of disruptive event start date and step functions that estimate impact of a disruptive event for a good at a selling location. FIGS. 1-6. Eliciting user input of an impact is supported by 0016. Using the disruptive event data for forecasting and generating reports is supported throughout the application, claims, figures and related applications that are incorporated by reference.

Applicants respectfully submit that the new claim 65 should be allowable over Fields et al.

Claim 2

Claim 2 includes the limitations:

The method of claim 65, wherein the method accommodates impact estimates that can be both positive and negative.

These limitations are not found in Fields et al. for the reasons given in our last response.

We point out that while the words of the claim have been amended, the scope of the claim is unchanged. The phrase “or” can be disjunctive or conjunctive, depending on the circumstance. One of ordinary skill in the art would have read the original claim wording as conjunctive, which is not changed by the Examiner’s misreading of the claim.

Therefore, claim 2 should be allowable over Fields et al.

Claims 3 and 13

Claims 3 and 13 should be allowable over Fields et al. for at least the same reasons as claim 65, from which they depend.

Claim 12

Claim 12 includes the limitations:

The method of claim 65, wherein the disruptive events include both disruptive events that have not yet taken place and disruptive events have that already taken place.

These limitations are not found in Fields et al.

Fields has demand curves, not disruptive events.

Therefore, claim 12 should be allowable over Fields et al.

Claims 18-20

Claims 18-20 should be allowable over Fields for at least the same reasons as claim 65, from which they depend and because the sophisticated forecasting techniques identified would not be applicable in Fields’ problem domain and are not called out by Fields.

Claims 23-26

Claim 23 includes the limitations:

The method of claim 65, evaluating an actual impact of least one particular disruptive event that has already taken place at least a predetermined period prior to adjustment of the projected demand, and adjusting the impact estimates based on the evaluated actual impact of the disruptive event.

The method of claim 23, wherein the predetermined period is user selected.

The method of claim 23, wherein the predetermined period is measured in days.

The method of claim 23, wherein the predetermined period is measured in a time increments of less than a day.

These details are not anticipated by Fields.

Our prior reading of claim 23 was mistaken. What these claims teach is refining an impact estimate currently in use by the method some time after the disruptive event has happened. See 0016, 0025-26 and 0029. What Fields teaches feels more like a rolling average (col. 4, lines 60-67; col. 6, lines 5-35). Fields certainly does not anticipate the detail called out by claims 23-26.

Fields cannot work in the way claimed, because it applies to daily sales. There is no suggestion or teaching in Fields, as required for a § 102 rejection, to refine a demand curve and recalculate a demand estimate during the day to which the demand is being applied.

Therefore, claims 23-26 should be allowable over Fields.

Claims 59-61

Claim 59 includes the limitations:

a processor;

memory coupled to the processor;

logic and resources operatively coupled to the memory and processor, the logic and resources adapted to maintain a calendar of past and future disruptive events that impacted or will impact demand for a particular item at a particular location, wherein the disruptive events have a start date and are either open-ended or have a distant end date that is appropriately modeled by a step impact on sales history or projected demand;

the logic and resources utilizing the calendar of disruptive events to apply impact estimates to adjust the projected demand for the plurality of items at the plurality of locations, wherein the impact estimates for disruptive events that already have taken place are applied to sales history quantities used to project demand, and the impact estimates for disruptive events that have not yet taken place are applied to adjust the projected demand.

These limitations are not found in Fields et al.

The Examiner treats this claim as including the same limitations as claim 1. (OA at 14) However, comparing this claim to OA at 4, Arg. #1, the Examiner cannot ignore in that this system claim includes logic that applies to both "past and future disruptive events". Fields does not have such a calendar. The difference between our teaching and Fields' different function, different way and different result can be seen in our teaching that a disruptive event can begin as a future event and, with the passage of time, become a past event, with the system automatically handling the transition without user intervention.

Therefore, claim 59 should be allowable over Fields et al.

Applicants respectfully submit that claims 1-3, 12-13, 18-20, 23-26, and 59 should be allowable over Fields et al.

Rejection Under 35 U.S.C. § 103(a) of Claims 4 and 14-17

The Examiner rejects **claims 4 and 14-17** under 35 U.S.C. § 103(a) as unpatentable over Fields et al. (U.S. 5,459,656). (Claim 6 has been cancelled.)

Claim 4 includes the limitations:

wherein the impact estimates are quantities added to the sales history quantities, for past disruptive events, and to or the projected demand, for future disruptive events.

Claims 14-17 include the limitations:

wherein a plurality of impact estimates for the plurality of disruptive events are combined additively.

wherein a plurality of impact estimates for the plurality of disruptive events are combined by a combination of addition and multiplication.

wherein a plurality of impact estimates for the plurality of disruptive events are applied beginning with a most recent disruptive event.

wherein a plurality of impact estimates for the plurality of disruptive events are applied beginning with a most distant disruptive event

These limitations are not found in Fields et al.

The Examiner proposes to change the key principle of operation, the use of demand curve families, in order to modify Fields and represent an impact estimate that admittedly "is more multiplicative" to apply an additive approach, using an efficiency rationale. The Examiner has not given enough detail of how she envisions this additive approach for us to understand how it would work or whether it would produce the

advantage that purportedly would motivate one of ordinary skill in the art to cobble a different approach onto Fields' elegance. To the point, use of multiplicative demand curves is mentioned 131 times in the application and is a fundamental principle of operation for Fields, which the Examiner is not allowed to change in order to support a § 103(a) rejection. M.P.E.P. 2143.01; see L.L. Barry, R.A. Weinhardt, M. Reinhart, *Obviousness Under 35 U.S.C. 103 Basic Student's Manual*, pp. 25-26 (U.S. P.T.O. Office of Patent Policy Dissemination, Rev. 4 1998). "As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. *In re Ratti*, 270 F. 2d 8 10, 8 13, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative." Barry et al., *Obviousness Under 35 U.S.C. 103, supra*, pp. 25-26; *explaining*, M.P.E.P. 2143.01.

In terms of combining the impact of multiple disruptive events, this is completely smoothed over in Fields when a single demand curve is selected. Nothing resembling claims 14-17 is taught anywhere in Fields.

Therefore, Applicants respectfully submit that claims 4 and 14-17 should be allowable over Fields et al.

Rejection Under 35 U.S.C. § 103(a) of Claims 21-22

The Examiner rejects **claims 21-22** under 35 U.S.C. § 103(a) as unpatentable over Fields et al. (U.S. 5,459,656) in view of Crosswhite (U.S. 6,611,726).

Claims 21-22 should be allowable over Fields in view of Crosswhite for at least the same reasons as claim 65, from which they depend.

Rejection Under 35 U.S.C. § 103(a) of Claims 57 and 60

The Examiner rejects **claims 57 and 60** under 35 U.S.C. § 103(a) as unpatentable over Fields et al. (U.S. 5,459,656) in view of Waller et al. (U.S. 2003/0195791). (Claim 63 has been cancelled.)

In general, it is the Applicants' position that Waller would not be accessible to those of ordinary skill in the relevant art. Those of ordinary skill in designing inventory management and supply chain systems have a different skill set than those who read Ghosh's "Formulating Retail Location Strategy in a Changing Environment" or Waller's discussion of optimizing product selection to maximize revenue from a particular shelf

layout. Perhaps a bright candidate for a master's degree in operations research might be able to work through both Fields and the esoteric optimization materials, but that graduate candidate would not be one of ordinary skill in retail management. Assertion of Ghosh and Waller as references raises the issues of whether one of ordinary skill in the art would select such references for combination with Fields and whether they would select particular features of the references, which depends, in part, on whether their mathematical skills would be strong enough for them to be drawn into studying, understanding and applying objective functions and other optimization math in order to improve on a production planning system.

Applicants note that the Examiner has not provided any of the discussion of the level of ordinary skill in the art, which would be necessary to justify considering either Waller or Ghosh as a reference. *See, KSR International Co. v. Teleflex, Inc.*, 550 U.S. , 127 S. Ct. 1727; 167 L. Ed. 2d 705; 82 U.S.P.Q.2D (Apr. 30, 2007) and *Ex parte Jud*, Appeal No. 2006-1061, 2007 Pat. App. LEXIS 9, (BPAI Jan. 30, 2007) (expanded panel, informational opinion). On their faces, the two references would not be selected by one of ordinary skill, because they are too difficult to read and not closely enough related to production planning to justify the effort. While the Examiner and counsel have both taken graduate courses in operations research and can at least read the references, that does not mean that even the Examiner would select or consider Waller or Ghosh for combination with Fields' production planning disclosure, except when using these claims as a blueprint or roadmap for seeking out references and features. We submit that one of ordinary skill in the art would view Waller as holding potential for a different group of people to build a different product, and not for those who worked on Fields to modify their production planning system.

Applicants respectfully submit that claims 57 and 60 should be allowable over Fields et al. in view of Waller et al.

Rejection Under 35 U.S.C. § 103(a) of Claims 58 and 61

The Examiner rejects **claims 58 and 61** under 35 U.S.C. § 103(a) as unpatentable over Fields et al. (U.S. 5,459,656) in view of Ghosh et al. ("Formulating Retail Location Strategy in a Changing Environment"). (Claim 64 has been cancelled.)

Claims 58 and 61 include the limitations:

wherein the disruptive events represent opening or closing of a competing store that impacts sales or demand at the one or more selling locations

These limitations are not found in Fields et al. in view of Ghosh et al.

Like Waller, Ghosh is an optimization reference that appeals to a different group of people to build a different product, and not for those who worked on Fields to modify that production planning system.

We visited the library and accessed JSTOR to get a legible copy of Ghosh, from the Journal of Marketing. The legible copy was accompanied by a link page of references accessible from the paper's bibliography. The first four references listed are:

Variable-Sum Game Models of Marketing Problems

Helmy H. Baligh; Leon E. Richartz

Journal of Marketing Research, Vol. 4, No. 2. (May, 1967), pp. 173-183.

Stable URL:

[http://links.jstor.org/sici?sici=0022-](http://links.jstor.org/sici?sici=0022-2437%28196705%294%3A2%3C173%3AVGMOMP%3E2.0.CO%3B2-C)

[2437%28196705%294%3A2%3C173%3AVGMOMP%3E2.0.CO%3B2-C](http://links.jstor.org/sici?sici=0022-2437%28196705%294%3A2%3C173%3AVGMOMP%3E2.0.CO%3B2-C)

Airline Seat Share: A Study in False Optimization

Seymour D. Barcun; Peter Jeming

Management Science, Vol. 20, No. 2, Application Series. (Oct., 1973), pp. 146-153.

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[http://links.jstor.org/sici?sici=0025-](http://links.jstor.org/sici?sici=0025-1909%28197310%2920%3A2%3C146%3AASSASI%3E2.0.CO%3B2-I)

[1909%28197310%2920%3A2%3C146%3AASSASI%3E2.0.CO%3B2-I](http://links.jstor.org/sici?sici=0025-1909%28197310%2920%3A2%3C146%3AASSASI%3E2.0.CO%3B2-I)

Location of Bank Accounts to Optimize Float: An Analytic Study of Exact and Approximate Algorithms

Gerard Cornuejols; Marshall L. Fisher; George L. Nemhauser

Management Science, Vol. 23, No. 8. (Apr., 1977), pp. 789-810.

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[http://links.jstor.org/sici?sici=0025-](http://links.jstor.org/sici?sici=0025-1909%28197704%2923%3A8%3C789%3ALOBATO%3E2.0.CO%3B2-1)

[1909%28197704%2923%3A8%3C789%3ALOBATO%3E2.0.CO%3B2-1](http://links.jstor.org/sici?sici=0025-1909%28197704%2923%3A8%3C789%3ALOBATO%3E2.0.CO%3B2-1)

Metagame Analysis of Competitive Strategy

Biplab K. Dutta; William R. King

Strategic Management Journal, Vol. 1, No. 4. (Oct. - Dec., 1980), pp. 357-370.

Stable URL:

[http://links.jstor.org/sici?sici=0143-](http://links.jstor.org/sici?sici=0143-2095%28198010%2F12%291%3A4%3C357%3AMAOCS%3E2.0.CO%3B2-E)

[2095%28198010%2F12%291%3A4%3C357%3AMAOCS%3E2.0.CO%3B2-E](http://links.jstor.org/sici?sici=0143-2095%28198010%2F12%291%3A4%3C357%3AMAOCS%3E2.0.CO%3B2-E)

Forward references (34 total) reported by Scholar.Google.com include titles such as:

Capturing Geographically Localized Misspecification Error in Retail Store Choice Models

RT Rust, N Donthu - Journal of Marketing Research, 1995

Appropriating Value from Computerized Reservation System Ownership in the Airline Industry

KA Duliba, RJ Kauffman, HC Lucas - Organization Science, 2001

Discretization and resolution of the (r|Xp)-medianoid problem involving quality criteria

R Suárez-Vega, DR Santos-Peñate, P Dorta-González - TOP, 2004

Neither the references cited nor the references citing Ghosh are in any research realm to which those of ordinary skill would turn for improvements on Fields' production planning disclosure.

Applicants submit that those of ordinary skill in the art would expect store cite location decisions to be made in a different department by different people with different training and would not look to Ghosh (or understand Ghosh) as a resource for improving upon Fields' production planning system.

Applicants respectfully submit that claims 58 and 61 should be allowable over Fields et al. in view of Ghosh et al.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 a.m. to 5:30 p.m. PST, Monday through Friday, and can be reached at his cell phone at (415) 902-6112 most other times.

Fee Authorization. The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0869 (BLFR 1006-1).

Respectfully submitted,

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